

Amendments to the Claims

This listing of claims will replace the originally filed claims in the application.

Listing of Claims:

Claims 1 – 12 (cancelled).

Claims 13 – 24 (cancelled).

Claim 25 (new): A method which may be used for operating a production plant, said method comprising:

- a) treating at least one gas mixture with at least one treatment unit, wherein said treatment unit is supplied with electricity;
- b) producing at least one fluid with said treatment unit;
- c) operating said treatment unit during at least one first period, when the cost of electricity is greater than a first predefined value;
- d) operating said treatment unit during at least one second period, wherein:
 - 1) said cost is less than a second predefined value; and
 - 2) said second value is less than or equal to said first value;
- e) storing at least part of said fluid during at least part of said second period, wherein:
 - 1) said fluid is stored in at least one storage tank; and
 - 2) said fluid is stored as either a liquid or a gas;
- f) delivering at least part of said fluid to a customer during at least part of said first period, wherein said fluid delivered is from said storage tank;
- g) producing at least one fluid with a first set of predefined characteristics, wherein:
 - 1) said fluid with said first characteristics is produced by said treatment unit during at least part of said second period;
 - 2) said first characteristics comprise:
 - i) a first purity;
 - ii) a first flow rate;
 - iii) a first temperature; and
 - iv) a first pressure;
- h) reducing the power consumption of said treatment unit to a reduced level, wherein:
 - 1) said power consumption is reduced during part of said first period; and

- 2) said reduced level is less than the power consumption level during said second period; and
 - i) producing at least one fluid with a second set of predefined characteristics, wherein:
 - 1) said fluid with said second characteristics is produced by said treatment unit during at least part of said first period; and
 - 2) said second characteristics comprise at least one member selected from the group consisting of:
 - i) a second purity less than said first purity;
 - ii) a second flow rate less than said first flow rate;
 - iii) a second temperature less than said first temperature; and
 - iv) a second pressure less than said first pressure; and
 - 3) said fluid with said second characteristics is not delivered to said customer.

Claim 26 (new): The method of claim 25, wherein:

- a) said treatment unit comprises an air separation unit that produces at least one product; and
- b) said product comprises at least one member selected from the group consisting of:
 - 1) at least one stream enriched with gaseous oxygen;
 - 2) at least one stream enriched with gaseous nitrogen;
 - 3) at least one stream enriched with gaseous argon;
 - 4) at least one stream enriched with liquid oxygen;
 - 5) at least one stream enriched with liquid nitrogen; and
 - 6) at least one stream enriched with liquid argon.

Claim 27 (new): The method of claim 25, wherein said reduced level is at least about 25% less than said power consumption during said second period.

Claim 28 (new): The method of claim 27, wherein said reduced level is at least about 50% less than said power consumption during said second period.

Claim 29 (new): The method of claim 25, further comprising producing at least one fluid with said treatment unit, wherein:

- a) said fluid is produced during at least part of said first period;

- b) said fluid is at least partly produced with a purity substantially the same as the purity produced during at least part of said second period; and
- c) said fluid is produced with a flow rate, wherein said flow rate comprises at least one member selected from the group consisting of:
 - 1) a flow rate less than the flow rate produced during said second period; and
 - 2) a flow rate substantially the same as said flow rate produced during said second period.

Claim 30 (new): The method of claim 29, wherein said fluid comprises at least one member selected from the group consisting of:

- a) a nitrogen-enriched stream; and
- b) an argon-enriched stream.

Claim 31 (new): The method of claim 25, wherein said treatment unit treats at least one gas mixture throughout said first period.

Claim 32 (new): The method of claim 31, further comprising compressing said gas mixture, wherein:

- a) said treatment unit comprises at least one compressor;
- b) said compressor operates with a reduced load during said first period; and
- c) during said first period at least part of said compressed gas mixture is vented to the atmosphere.

Claim 33 (new): The method of claim 25, wherein less fluid is produced during said first period than during said second period.

Claim 34 (new): The method of claim 25, wherein no fluid is produced during said first period.

Claim 35 (new): The method of claim 25, wherein said fluid sent to said storage tank is of substantially constant purity.

Claim 36 (new): An apparatus which may be used as a production plant, said apparatus comprising:

- a) at least one treatment unit, wherein said treatment unit:
 - 1) treats at least one gas mixture;

- 2) delivers at least one fluid to a customer; and
- 3) is supplied with electricity;
- b) a first operating means for directing said treatment unit to operate during periods, wherein said periods comprise:
 - 1) a first period when the cost of electricity is greater than a first predefined value; and
 - 2) a second period, wherein:
 - i) said cost is less than a second predefined value; and
 - ii) said second value is less than or equal to said first value;
- c) at least one storage tank and a means for storing at least part of said fluid in said tank during said second period;
- d) a delivery means for delivering said fluid stored in said tank to said customer, wherein said delivery is during said first period;
- e) a first production means for producing in said treatment unit at least one fluid with a first set of predefined characteristics, wherein:
 - 1) said fluid with said first characteristics is produced during at least part of said second period; and
 - 2) said first characteristics comprise:
 - i) a first purity;
 - ii) a first flow rate;
 - iii) a first temperature; and
 - iv) a first pressure;
- f) a second production means for producing in said treatment unit at least one fluid with a second set of predefined characteristics, wherein said characteristics comprise at least one member selected from the group consisting of:
 - 1) a second purity less than said first purity;
 - 2) a second flow rate less than said first flow rate;
 - 3) a second temperature less than said first temperature; and
 - 4) a second pressure less than said first pressure;
- g) a second operating means for directing said treatment unit to operate wherein the power consumption of said treatment unit during said first period is less than the power consumption of said treatment unit during said second period; and
- h) a diverting means for diverting a product from delivery to said customer; wherein:

- 1) said product comprises at least one member selected from the group consisting of:
 - i) said fluid produced;
 - ii) at least part of said gas mixture; and
 - iii) air; and
- 2) said product is diverted during at least part of said first period.

Claim 37 (new): The apparatus of claim 36, further comprising:

- a) a compressor, wherein said compressor compresses said gas mixture;
- b) a means for sending said compressed gas mixture to said treatment unit; and
- c) a means for venting said compressed gas mixture.

Claim 38 (new): The apparatus of claim 36, further comprising a delivery means for delivering said fluid stored in said storage tank to said customer, wherein said delivery is during at least part of said first period.